

Appendix A: Assumptions Behind Costs



Following are some of the overall assumptions behind the cost estimates:

- **Implementation Costs** – The basis for implementation costs for the “Automate, integrate, and consolidate business processes” projects was based on the previous Dye Management Group, Inc. and the Moss Adams estimates. The implementation costs for other projects were based on estimates of the county and consultant resources to implement the process and systems as well as software and hardware needed.
- **Operating Costs** – The operating costs were computed for the “Automate, integrate, and consolidate business processes” projects was based on the Dye Management Group, Inc. and the Moss Adams estimates. Operating costs for other opportunities were based on the estimated support costs including technology support, upgrades, and annual license fees.
- **Lifecycle** – Costs were estimated over a 10-year period to correspond to a reasonable system life.
- **Inflation** – A 5% inflation factor was added to current and future business process costs. This rate was developed in collaboration with King County team members. These were applied to the costs from the implementation point through the ten-year period.
- **Discount Rate** – A 6% discount rate was used in computing the net present value. This rate was developed in collaboration with King County team members.
- **Debt Service Rate** – A 5% debt service rate was used assuming that the projects would be financed by issuing bonds. This rate was developed in collaboration with King County team members. A ten-year bond redemption period was assumed.
- **Contingency** – A contingency rate of 15% to 20% was applied to the implementation costs of different improvement opportunities depending on the perceived risk of each.

Additional details on cost assumptions are in Chapter III: Evaluation, of the Business Operations Model and in Excel spreadsheets at the OIRM.

Appendix B: Assumptions Behind Benefits



Following are our assumptions behind tangible benefits, and a listing of intangible benefits for each recommended payback opportunity. Shown here are estimated benefits for a typical year. In the Business Operations Model, the benefits were also estimated over 10 years to correspond to the system lifecycle. A 5 percent inflation factor and 6 percent discount rate were used for these 10-year calculations.

A. Finance

1. Automate, Integrate, and Consolidate Processes

This opportunity has the highest potential for realizing both tangible and intangible benefits. Benefits from this opportunity will be realized over several years, with incremental improvements each year. It would be unrealistic to expect immediate process efficiencies. In fact, many organizations report a small decline in productivity following a major finance system implementation while employees are adjusting to new processes and applications.

Where possible, benefits were calculated using King County processing costs, transaction volumes, record counts, and published financial benchmarks. In most cases, benefits were calculated assuming an average productivity increases between 10 and 15 percent¹. Process costs, transaction volumes, and record counts were provided by King County personnel. We have not independently verified the accuracy of the information provided.

a. Tangible

The following table lists the benefits and the projected annual savings once fully implemented.

¹ Based on GFOA estimate of average productivity increases resulting from an ERP implementation. See “Technology Needs Assessments, Evaluating the Business Case for ERP and Financial Management Systems,” by Rowan Miranda, Shayne Kavanagh, Robert Roque, Government Finance Officers Association, 2002.

Automate, Integrate, and Consolidate Quantifiable Benefits Summary

General Ledger	\$ 142,000
Project Accounting	268,000
Grant Accounting	300,000
Purchasing Process	614,000
Accounts Payable	1,501,000
Accounts Receivable	1,584,000
Inventory	108,000
Capital Asset Management	142,000
Cash and Debt Management	119,000
Labor Distribution	35,000
Financial Reporting Process Improvements	348,000
Purchase savings through integrated procurement process	1,050,000
Total Annual Savings	\$6,211,000

- The General Ledger business process costs \$ 1.42 million; 10 percent processing efficiencies yield \$142,000 annually.
- Agencies maintain side systems (mostly spreadsheets and manual files) to address the deficiencies in the two project accounting systems. Eliminating these side systems will allow agencies to focus on strategic project management accounting activities rather than manual processes. Assuming a 15 percent improvement would result in \$268,000 annual savings.
- Currently, grant management is excessively time consuming and error prone due to its manual nature. Some ARMS agencies track all grant activities outside the financial system. Subject matter experts at the three largest grant-funded agencies (Public Health, Community, Human Services [DCHS], and Transit) estimate these inefficient processes consume a high percentage of their grant accounting, accounts payable, and financial reporting processing time. Providing better grant management tools through an integrated grant accounting system in conjunction with central oversight and standard procedures should allow the county to reduce grant management process costs.

Countywide, agencies reported over \$1 million in annual grant management business process costs. It is likely that these costs are understated because grant management activities cross multiple business functions (for example, accounts payable, project accounting, and billing). Published benchmarks for grant management savings related to an ERP implementation were not available. We calculated savings based on estimates provided by DCHS and

Transit. DCHS estimates a 33 percent reduction in Accounts Payable processing costs could be achieved through better system support for grant management. Annual DCHS accounts payable business process costs total \$420,000; a 33 percent savings yields \$138,000. For the remaining agencies, we calculated savings at 20 percent of current business process costs based on an estimated provided by transit. Annual grant management business process costs for all agencies except for DCHS total \$812,000; a 20 percent savings yields \$162,000.

- King County issues over 28,000 purchase orders each year with an annual processing cost of \$6.2 million. Agency processing costs per purchase order ranged from \$40 to over \$500, depending on the agency reporting. The average King County process cost per purchase order is \$200. A 2003 study by the University of Maryland estimated that creating a purchase order in most government organizations costs between \$127 and \$175. A somewhat less than 10 percent improvement in purchasing efficiency yields \$614,000 each year.
- The cost of processing AP vouchers in ARMS is between \$16.78 and \$43.33 per voucher (calculated as the total reported accounts payable business process costs divided by the number of vouchers issued). A GAO study placed the average voucher cost at approximately \$3.55 per voucher². Transit (an IBIS agency) reports the lowest per voucher cost at \$3.22. IBIS agency costs per voucher are 80% less than the lowest ARMS cost per voucher. Automating the three-way match will dramatically reduce the cost per voucher for ARMS agencies. We believe it is reasonable to assume at least a 50% reduction in the cost per voucher for ARMS agencies. Annual ARMS agency accounts payable business process costs total \$3.6 million; a 50 percent savings yields \$1.8 million. Centralized Accounts Payable would require additional staff, and an increase of 5 FTE has been included in this net savings. Total annual savings are \$1,501,000. We did not estimate any Accounts Payable savings for IBIS agencies.
- Accounts Receivable and Collections represent the highest overall business process costs to the county at \$8.0 million each year. For many agencies, invoice preparation is primarily a manual process. Invoices are manually assembled; paper copies are made and filed to severe limitations in the current applications. We believe that automating, standardizing and centralizing receivable processing would yield benefits in excess of the 10 to 15 percent associated with general business process improvement efforts. Annual accounts receivable business process costs total \$8 million; a 20 percent savings yields \$1.6 million.
- Common inventory procedures and accounting practices combined with improved integration between agency systems will give managers better

² “Creating Value Through World-Class Financial Management,” United States General Accounting Office, 2000.

visibility of inventory costs. Estimated annual savings are 10 percent of \$1.1 million, or \$108,000.

- The county spends \$2.3 million dollars annually on financial reporting and decision support. Considerable time is spent consolidating data from multiple systems, maintaining crosswalks, and manually preparing reports. Based on input from county agencies and GFOA standards, we estimate that at least 15 percent of the financial reporting process is spent on tasks that would be automated in a single financial system, saving the county \$348,000 annually.
- A 2003 King County Auditor Management Letter documented problems resulting from the lack of integration between the Fixed Asset System and IBIS. This report, focused on ITS, found \$2.6 million dollars in assets not recorded in the IVIS fixed asset system. These were primarily IBIS assets. The Auditor's report also references repeat State Auditor's Office (SAO) findings with regards to poor physical inventory processes and a lack of integration between IBIS and IVIS. A single integrated financial system addresses these issues by automating integration between accounts payable and asset management for all purchases. The Capital Asset Management Business function cost \$792,323 annually, general capital asset management improvements will allow all agencies to realize processing efficiencies; ARMS and Straddle agencies will see more efficiency (estimated 20 percent) through automation of manual processes. Estimated annual savings are \$142,000.
- The Treasurer estimates that monitoring and reconciling the Property Tax Billing System (PBS) to ARMS interfaces consumes approximately 0.8 FTE. Additional effort is also required to monitor the IBIS to ARMS cash interface. Eliminating the cash interface, improving the PBS interface, and improving general processes will save 10 percent of current Cash and Debt Management process costs of \$1.2 million. Estimated annual savings are \$119,000.
- Fully integrated time entry, labor distribution, and project accounting functionality will eliminate the need for duplicate data entry. Annual labor distribution process costs are \$350,000; 10 percent efficiency yields \$35,000.
- A single purchasing system will give the county better information on purchasing by commodity which will give buyers additional leverage when negotiating contracts. An Arthur Andersen/Gartner Group study estimated that indirect spending is, on average, 30 percent of an organization's annual revenues and that 30 percent of an organization's indirect spending is typically associated with contract buying. King County's indirect spending is approximately \$700 million per year. We estimate \$210 million dollars are related to indirect contract buying. That same study estimated savings from contractor compliance and supplier consolidation of 8 percent of

eligible indirect spending. For King County, a 0.5 percent savings yields \$1 million annually.

b. Intangible

- Improving the grant management process will free up agency time and allow the pursuit of additional grant revenue and more timely performance measures and service delivery information to grantors.
- A single, integrated finance system will allow the county to shorten its month-end and year-end closing times (so long as delays caused by the 3-week payroll posting lag are addressed). Shorted closing cycles will provide management with more timely information and allow agencies to send project and grant bills earlier.
- Integrating Accounts Receivable customer and Accounts Payable vendor information will allow the county to identify situations where vendors with invoices to be paid also have unpaid receivable balances.
- The leading ERP solutions include tools to enhance decision support, including online available budget balances, the ability to drill down to detail transactions, and ad-hoc queries.
- Distributing the data entry function will provide more timely and accurate information.
- Producing more timely and accurate accounts receivable aging reports will allow managers to identify collection problems more quickly and take appropriate action.
- Implementing a “perpetual inventory” system for capital assets provides managers with direct access to current asset information throughout the year. A “perpetual inventory” approach also allows the county to discontinue the annual full physical inventory of capital assets. Asset balances can be verified using random tests along with a periodic inventory done on a rotating basis (The GFOA recommends that each asset be accounted for at least once every five years).
- A single, integrated financial system will allow King County and Metro to complete the merger approved by the voters in 1992. As noted in a 1999 King County Auditor Report, “The single county-wide, department-wide financial system should reduce the accounting complexity ... and promote consistency in management reporting...”³.
- A single financial system simplifies the audit process.

³ “King County Department of Transportation Consolidation Opportunities,” Susan Baugh, Principal Management Auditor, King County, 1999.

- Better support for grant billing would allow the county to decrease the average days receivable balances are outstanding. Grant agencies estimate the current turnover rate to be up to two-and-a-half months. A dedicated grant accounting module would provide integrated data, automated billing, and EDI and would allow agencies to reduce turnover time.

2. Document Management and Imaging

a. Tangible

Implement Document Management and Imaging Quantifiable Benefits Summary

Archive Costs	\$ 1,154
Document Creation	2,211,000
Document Filing and Retrieval	278,000
Total Annual Savings	\$2,490,154

Savings related to document imaging fall into four main categories:

- Avoidance of record storage fees for archived records. In 2003, 240 boxes were sent to the records center with an annual cost of \$4.81. Annual savings is \$1,154. This opportunity assumes that only new records are scanned. Documents already at the record center will remain in printed format.
- The State of Washington estimates that each filed document costs \$12.00 of clerical and managerial time to prepare. Based on the number of boxes created annually, we estimate that anywhere between 180,000 and 220,000 invoice documents are prepared for payment and eventual filing. Annual savings by elimination of document preparation time is \$2,211,000.
- State of Washington Department of General Administration estimates that each inch of file space costs \$48.30 to file and retrieve. Annual savings through online access to documents is \$278,000.

b. Intangible

U.S. National Archives and Records Administration (NARA) has documented numerous benefits from moving to optical storage for government records, these include:

- Making records accessible to agency staff from remote locations and at any time.

- Providing rapid access to records needed in business dispute resolution.
- Reducing the need for parallel record keeping systems (e.g., paper and electronic).
- Ensuring authenticity and reliability of records.
- Ensuring the integrity of records and the security of record- keeping processes.
- Permitting retrieval of records based on keywords or record contents.
- Making it easier to create a variety of reports used to manage the collection of records.
- Facilitating audits.

3. Procurement Best Practices

Procurement Cards and electronic catalogs will allow the county to reduce the number of purchase orders processed.

a. Tangible

The following table lists the benefits and the projected annual savings once fully implemented.

Quantifiable Benefits Summary

P-Cards Process Savings	\$ 127,800
Electronic Catalogs Process Savings	1,383,280
eProcurement Purchase Cost Savings	3,937,500
Total Annual Savings	\$5,448,580

- P-cards replace the direct voucher process for purchases under \$2,500. Based on transactions volumes with the current P-card program, estimated annual countywide P-card volumes would be 36,000. A recent GAO study estimated the cost to process a single voucher at \$3.55. Eliminating these vouchers saves \$127,800.
- Electronic catalogs reduce the total number of purchase orders issued and greatly streamline the purchasing process. The county issued 28,825 purchase orders in 2003. Gartner estimates that 30 percent of an organizations purchase orders can be replaced with E-Procurement. The Hackett Group estimates the cost of the average purchase order is \$175,

while the cost of an E-Procurement transaction is \$15. Annual savings would be \$1,383,280.

- Consolidating vendors through electronic catalogs will allow the county to negotiate better pricing contracts with vendors. Gartner estimates total savings at about 8 percent of eligible purchases. Estimated annual savings are \$3,937,500.

b. Intangible

- P-cards simplify the purchasing process for smaller items. It is a more efficient process than blanket purchase orders.
- P-cards provide an approved mechanism for filling emergency needs.
- E-Procurement through the use of electronic catalogs eliminates many of the manual processes currently performed today. The Seattle School District reports a 50 percent reduction requisition process cost savings as a result of their E-Procurement initiative.
- P-cards provide timely payment to county vendors.
- Because P-cards and electronic catalogs reduce the time required to complete a purchase, goods can be delivered more quickly. This may allow some agencies to reduce stock levels.
- Ordering through electronic catalogs normally gives buyers the ability to see and track orders online.
- Reduces inventory-holding costs by providing greater visibility across the supply chain.

4. Updated Asset Management Policies

Updating the county's Capital Asset Management policies provides an immediate return on investment; the implementation costs are fully recaptured in the first year the policy is adopted.

a. Tangible

The table below lists the benefits and the projected annual savings once fully implemented.

**Updated Asset Management Policies
Quantifiable Benefits Summary**

Reduction in number of Capital Asset Records	\$120,000
Total Annual Savings	\$118,000

- Increasing the capitalization threshold reduces the number of fixed assets tracked thereby reducing the overall fixed asset processing costs, particularly year-end physical inventory costs. Current Capital Asset Management process costs are approximately \$787,000 per year. Sixty percent of the county's 55,176 assets fall below the \$5,000 threshold. Estimated savings are 15 percent or \$118,000.

b. Intangible

- Reduces time coding fixed asset information on Accounts Payable vouchers.
- Reduces time spent preparing requisitions and purchase orders for assets under \$2,500. Current county policy requires purchase orders for all capital asset purchases; procurement policy allows direct vouchers for purchases less than \$2,500.

B. Human Resources

1. Implement Performance Management Best Practices

- Currently King County spends \$722,433 annually in support of performance appraisals, individual development plans, and merit pay processes. For purposes of this report, it has been assumed the costs of this amount breakdown in the following manner:

Activity	Percent	Cost
Performance Appraisal	40	\$288,973
Individual Development Plan	10	72,243
Merit Pay	50	361,217
Total		\$722,433

The county reports that approximately 40 percent of the county workforce (6,313 employees) had performance appraisals last year for a performance appraisal cost of nearly \$46 per employee. Completing performance appraisals for the balance of the county's workers (9,470 employees) would require an incremental cost of \$433,482 annually.

- Currently, the individual development plan process is not frequently used in the county. Based on the assumption that 10 percent (1,578 employees) of the county staff completed the individual development plan process last year, the cost of an individual development plan is nearly \$46 per employee.

Completing individual performance plans for the balance of the county's workers (14,205 employees) would require an incremental cost of \$650,324. Assuming that an individual development plan would be performed by every employee every two years, the annual incremental cost would be \$325,162.

- Currently, 6.4 FTE's are staffing the Human Resources subfunction related to performance appraisal and merit pay. The addition of 9,470 performance appraisals and 14,205 individual development plans would necessitate 4 additional staff located centrally at an annual salary plus benefits of \$83,700 each. It is anticipated that the actual costs associated with merit pay would not change, rather it would be awarded to people based upon true merit criteria.

The following table shows the following tangible benefits that can be realized by the county by implementing performance management and performance improvement best practices.

Implement Performance Management Best Practices Quantifiable Benefits Summary

Savings from increased retention	\$ 2,718,000
Savings associated with upgrading underperforming employees	11,363,760
Total Annual Savings	\$14,081,760

a. Tangible Benefits

- Retaining good employees is becoming more and more critical to business success or failure. The first step in employee retention is to determine which employees to retain through consistent, quantifiable measurement of performance on an ongoing basis.
- A recent study (*Workforce Planning: The Strategy Behind Strategic Staffing*, Christina Morfield, September 2002, HR.com) indicates that in most workforces only 34 percent of employees fall into the category of high performers, 8 percent are considered transitory, 31 percent are considered stable, and the remaining 27 percent are considered underperforming (*Employees and Profits: How to Increase the Bottom Line*, John Towler, February 2004, HR.com). Identification of the underperforming 27 percent through a process of qualification and quantification will allow the county to maximize efficiency in one of two ways: 1) by eliminating those workers through voluntary or involuntary separation; or 2) by improving the performance of those workers so they are no longer considered inferior. Eliminating underperforming workers allows for the redirection of attention and resources to productive employees.

Assuming 20 percent (3,157) of the county's workforce is underperforming, based on the studies that the cost of 'dealing with and/or re-working' the work of those employees costs an average of 30 percent of their annual salary. Improving the output of these underperforming workers would result in benefits accruing to the county. If 20 percent (631) of the underperforming workers could be upgraded through performance measurement programs, the annual savings would be approximately \$18,000 per upgraded employee for an aggregate annual benefit of \$11,363,760.

Research indicates that it costs anywhere between 150 and 250 percent of a position's annual salary to replace the position (Costing Human Resources, 4th Edition, Wayne Cascio, 1999, South-Western College Publishing). In 2003, 453 King County positions were vacated, not including positions vacated by retirees. Assuming that 20 percent of those positions (91) were vacated by workers that the county regrets losing, a substantial savings can be realized by proactively preventing the loss of those workers. Using a very conservative replacement cost of 50 percent of salary, retaining 91 valuable employees each year that have an average annual salary of \$60,000 would generate a benefit of \$2,718,000. Additional benefits would be realized in retaining the detailed knowledge of employees who do not leave.

b. Intangible Benefits

The intangible benefits of moving forward into a culture of performance management and performance improvement are many:

- Increased commitment to efficiency.
- Increased awareness of where individuals meet and/or exceed identified job expectations.
- Increased employee accountability for job performance.
- Increased efforts by 'average' employees in job performance to increase their performance appraisal ratings.
- Increased morale due to high performers being rewarded by true merit pay.
- Greater alignment between job positions and core organizational values and goals.
- Improved information on which to base job promotion, succession planning, and merit pay.

2. Refine and Standardize the Collective Bargaining Process

King County has indicated that it takes, on average 8 months to negotiate a contract, with some taking more time and others less. Average contract duration is 3 years. Total annual hours per committee member is estimated at 80 to 100 hours. Over time, as contracts become more standardized, the committee hours will diminish, but do not anticipate this happening within the first 4 to 6 years.

a. Tangible Benefits

Refine and Standardize the Collective Bargaining Process Quantifiable Benefits Summary

Collective Bargaining	\$ 164,448
Total Annual Savings	\$ 164,448

In 2003, the county personnel costs for collective bargaining and associated processes totaled \$3,288,969. It is estimated these costs can be reduced by 5 percent by realizing the tangible benefits associated with this opportunity.

- Consistent use of language reduces the chances of misinterpretation of the intent of contract language. Thus, instances of conflict, such as grievances and litigation, and those costs associated, will be reduced. The county recorded 282 grievances in 2003. This does not include conflicts resolved before the “third stage,” i.e., when the conflict becomes an official grievance.
- Involving key administrators early in the planning process will allow for proactive planning and activity on the administration side concurrent with ongoing negotiations. This will reduce and possibly eliminate overtime hours associated with the 30-day mandate to implement contracts.
- Issues that are being negotiated for which system limitations apply, or costs are prohibitive, can be identified earlier in the process, thus allowing for time to develop alternatives.
- Standardization should reduce the time to complete contract negotiations.
- Standardization will reduce the amount of resources (time, staffing, and money) spent on system changes and/or augmentation.

b. Intangible Benefits

The intangible benefits of moving forward into a culture of performance management and performance improvement are as follows:

- Increased commitment to efficiency.

- Greater access to information in a timely and consistent manner.
- Building/supporting a stronger communication infrastructure, thus increased teamwork and commitment to unifying county policies and procedures.
- Greater alignment with King County goals and objectives.
- More productive use of county resources of money, staff, and time.

3. Develop and Implement Succession Planning and Mentoring

a. Tangible Benefits

Develop and Implement Succession Planning and Mentoring Quantifiable Benefits Summary

Succession Planning	\$ 1,330,080
Total Annual Savings	\$ 1,330,080

The following tangible benefits have been identified for this opportunity:

- Retaining good employees is becoming more and more critical to a program's success or failure. Employee retention reduces costs associated with replacing those employees who leave. As noted previously in this report, one of the primary reasons good employees leave organizations is because they are unhappy with the job itself. One way to address the issue of job fit is by providing opportunities for employees to try out positions.
- The time it takes to fill vacant positions can be reduced when successors, or potential successors, have been previously identified. The average time between identification of a vacant position and filling that position is not available from the county. According to a recent Washington State survey, their average time for placement is 43 days. When placing an internal candidate previously identified as a potential successor, the time between vacancy and placement could be reduced by 50–75 percent.
- The following computation uses retirement projections for the next five years provided by the county and best practice metrics for improvement factors.
 - Retirement Eligible FTE's. 3,623 FTE's will reach retirement age at King County over the next 5 years.
 - Key Positions. Assume that 60 percent (2,173) of these people fill what would be considered 'key' positions and that 60 percent (1,304) of those 'key' workers retire when they become eligible.

- Replacement Costs. Assume that 50 percent (652) of the ‘key’ positions being vacated due to retirement can be filled internally, and further assume that the county spends 50 percent of an annual salary (\$60,000) to replace a position. The total cost for replacement of 652 ‘key’ positions would be \$19,560,400.
- Succession Planning Costs. Assume the costs associated with succession planning activities represent 33 percent of an annual salary (\$60,000) for the position. Succession planning costs for 652 retirees total \$12,909,600.
- Benefit Calculation. Comparing the replacement-based costs (\$19,560,000) for the 652 positions to the succession-based costs (\$12,909,600), shows a resulting benefit to the county of \$6,650,400 over the next five years.

b. Intangible Benefits

The intangible benefits of moving forward into a culture that uses the tools of succession planning and mentorship programs include:

- Increased job satisfaction.
- Higher employee retention.
- Reduced lag time in bringing employees new to positions up to speed.
- Increased job performance.
- Greater alignment between job positions and the knowledge, skills, and abilities needed to fill those positions effectively.

4. Automate, Integrate, and Consolidate Human Resource Processes

a. Tangible Benefits

**Automate, Integrate, and Consolidate Human Resource Processes
Quantifiable Benefits Summary**

Benefits are included in Payroll	N/A
Total Annual Savings	N/A

(Note: The cost estimates for HR systems are included with those in the Payroll section). The tangible benefits of moving forward into a culture of

easily accessible data on which to base decisions and future planning are significant:

- A recent survey by Towers Perrin indicated that of 100 employers (representing 3 million employees) who moved toward self-service, 70 percent indicated ‘significant increase’ in transaction accuracy.
- Data entry becomes the responsibility of the workers themselves, freeing up personnel for other projects and/or other responsibilities.
- Reduction in departmental ad hoc systems and associated costs. Eleven agencies reported expenditures for human resources systems outside the central MSA/PeopleSoft costs. This does not include savings for spreadsheets or Access databases that may not have been specifically identified as human resources systems in the survey.
- Elimination of duplicate entry into more than one human resources/payroll system.
- Reduced need for re-work due to ‘dirty’ data from numerous sources.
- Greater ability to be in compliance with union contracts, state and federal laws, as well as county codes and ordinances.
- Greater accessibility to information (measured by reduction in days to get reports, synthesize data, etc.).
- More timely access to information (measured by reduction in days to get reports, synthesize data, etc.).

b. Intangible Benefits

The intangible benefits of moving forward into a culture of easily accessible data on which to base decisions and future planning are great:

- Increased buy-in from employees.
- Increased morale.
- Increased confidence in making decisions.

5. Implement Quality Assurance Strategies

a. Tangible Benefits

Implement Quality Assurance Strategies Quantifiable Benefits Summary

Quality Assurance Strategies	\$ 1,357,818
Total Annual Savings	\$ 1,357,818

Currently, King County incurs \$27,156,360 in personnel costs annually to provide human resources services. The full implementation of the quality assurance process included in the Human Resources Unification Project will ensure that the project's objectives are in place and practiced. It is estimated that this process will provide a benefit to the county equal to 5 percent of human resources' personnel expenditures or nearly \$1.4 million annually.

b. Intangible Benefits

The intangible benefits of moving forward into a culture of quality assurance are many, including the following:

- Increased commitment to efficiency.
- Increasing meeting and/or exceeding identified process, procedure, or policy expectations.
- Increased morale due to high performers being rewarded.
- Greater alignment between processes, procedures, policies, and the core organizational values and goals.

C. Payroll

1. Benefits

This opportunity has a high potential for achieving significant benefits for the county. It should be noted, however, that benefits will be realized over multiple years, with incremental process improvements expected annually. It would be unrealistic to expect immediate tangible impact. In fact, many organizations report a near-term decline in productivity following a major system shift while employees are adjusting to new processes and applications.

a. Tangible Benefits

**Automate, Integrate, and Consolidate Human Resource Processes
Quantifiable Benefits Summary**

Reduction in Payroll Processing Costs	\$ 3,192,291
Total Annual Savings	\$ 3,192,291

- **Reduced cost to produce a payment.** In 2003, the county spent nearly \$10.4 million to produce payroll payments. This is the aggregate cost for the timekeeping business function and the payroll processing and reporting business function, as well as for the payroll-associated ad hoc systems within the departments. In 2003, the county produced nearly 440,000 payments for a cost per payment of \$23.55.

A benchmarking study conducted in 2000 by Arthur Andersen for a public sector organization found total payroll cost per paycheck to vary in their benchmark group from a low of \$0.24 to a high of \$28.28, with a median of \$5.52. Adjusting the county's cost per payment to match the basis on which the Andersen cost per paycheck was calculated, results in a comparable county cost per paycheck of \$21.58. (Note: A study by Mercer calculated potentially comparable costs to be just over \$3 per paycheck.)

The same Andersen study found total payroll cost per employee to vary from a low of \$26.44 to a high of \$771.06, with a median of \$157.04. Based on a county employee count of 15,783 and the same adjustment as above, the county's total payroll cost per employee is \$601.72.

Substantial progress can be made in reducing the county's cost per payment through cost reductions achieved by implementing this opportunity. We estimate the reduction to be at least 30 percent of current annual Payroll Business Area costs or approximately \$3 million annually.

Following are additional calculations of savings in the payroll area. These savings have not been included in the benefit calculation but further corroborate the ability of the county to achieve savings.

- **Reduced operating costs.** The technical costs for MSA and PeopleSoft were nearly \$2.4 million in 2003, for a cost per payment of \$5.43. The Andersen study found these costs to

vary for their benchmark group from a low of \$0.0 to a high of \$4.57, with a median cost of \$0.47.

- **The operating costs allocated to MSA in 2003, are approximately \$1.2 million.** Consolidating operating costs by moving to a single human resources/payroll system would reduce these costs substantially.
- **Reduced timekeeping and time processing costs.** In 2003, the aggregate cost for the county's timekeeping function was approximately \$4.5 million.

Approximately 60 percent of the county's employees are paid through the MSA system accounting for \$2.7 million of the total timekeeping cost. This may appear to be a broad assumption, but because of the complexity and time consuming nature of the MSA timekeeping processes, the assumption likely understates the actual costs.

It is estimated that eliminating the MSA forms-based processes and migrating responsibility for entering employee time and labor information and other transactions to the employee via self-service capabilities will reduce overall timekeeping functional costs significantly.

- **Reduced payroll processing costs.** The county supports two payroll cycles; biweekly and semimonthly. Implementing this opportunity will result in all employees being paid on a single payroll cycle and eliminate the costs of processes and processing associated with dual cycles. It is estimated the consolidation will reduce overall payroll processing costs.
- **Reduced supplemental decision support and reporting costs.** The county spends approximately \$0.4 million dollars annually on supplemental decision support and reporting activities through development, maintenance and support of departmental ad hoc systems and processes related to accessing and accumulating payroll information. Considerable time is spent developing requests for data extracts, consolidating data from the two systems, entering data into ad hoc systems, maintaining crosswalks, and manually preparing reports.

It is estimated that migrating all the county's payroll data to a single system with a single set of data definitions and data query capabilities and providing managers with self-service access to payroll data will reduce these costs.

- **Reduced customer service costs.** In the State of Washington benchmarking study, 10 percent of total payroll costs were attributed to providing customer service. Applying that metric to the county's payroll processing costs results in an estimated cost of approximately \$1 million.

It is estimated that migrating the county's employees to a single payroll system and providing employees with payroll information self-service access and update capabilities will reduce these costs.

b. Intangible Benefits

- Timely, accurate paychecks.
- Current payroll manual.
- Avoidance of costly disputes.
- Decreased risk from technical support personnel turnover.
- Improved customer satisfaction.
- Improved payroll professional job satisfaction.
- Release from the constraints of 30 year old technology.
- Ability to quickly apply changes through reconfiguration.
- Reduced risk of system failure resulting from modifications.
- Better data availability to support collective bargaining.
- Quick implementation of collective bargaining agreements.

D. Budgeting

1. Automate, Integrate, and Consolidate Business Processes

Increasing automation for the budget process will provide the following tangible and intangible benefits. Benefits from this opportunity will be realized over several years, with incremental improvements each year. It would be unrealistic to expect immediate process efficiencies. In fact, many organizations report a small decline in productivity following a major finance system implementation while employees are adjusting to new processes and applications.

a. Tangible

Automate, Integrate, and Consolidate Business Processes Quantifiable Benefits Summary

Operating Budget Development	Not Estimated
Operating Budget Maintenance	Not Estimated
Total Annual Savings	

We believe this opportunity can provide significant tangible benefits to the county, but these were not included as part of the Business Case. We recommend that the County establish a capability to measure any such savings if it moves forward with the recommendation referenced here. Areas where there are potential tangible benefits are as follows:

- The Government Finance Officers Association estimates a 10-15 percent productivity increase resulting from ERP implementation. These savings would be derived from better use of resources by eliminating redundant entry of data at different levels, allowing more time for budget analysis and policy decision-making, reducing paperwork, and promoting standardization.

b. Intangible

Intangible benefits include:

- Improve the ability of the Council to analyze budgets and perform its oversight function.
- Provide a better understanding of the budget process by providing consistent information at all levels of budget development and creating common and better assumptions going into the budget phase.
- Provide reduced time to get to information which will in turn provide efficient delivery on information requests from Council, require fewer custom reports, and provide better visibility as to the changes at each stage.
- Eliminate unique departmental systems and databases for budget development.
- Provide the opportunity to check assumptions and numbers by inputting the budget requests early in the process.

2. Enhanced Budget Analytical Capability

Implementing activity-based costing, improved budget analysis, and performance measures and the analytical tools to support them will generate both tangible and intangible benefits.

a. Tangible

Enhanced Budget Analytical Capabilities Quantifiable Benefits Summary

Activity Based Costing	Not Estimated
Performance Measures	Not Estimated
Total Annual Savings	

We believe this opportunity can provide significant tangible benefits to the county, but these were not included as part of the Business Case. We recommend that the County establish a capability to measure any such savings if it moves forward with the recommendation referenced here.

Areas where there are potential tangible benefits are as follows:

- A reallocation of a percentage factor of the county's operating budget is a method of determining the benefit of implementing activity-based costing (ABC). ABC helps to deploy the budget dollars where they have the greatest benefit to the constituents of the county.

When the State of Washington implemented the Priorities for Government Process, they achieved an 8.8 percent savings for the current level budget. It is reasonable to assume that King County could achieve savings, as well.

- Using improved program analysis and performance measures to identify program efficiency savings and reallocate funds to higher priority activities.

b. Intangible

Intangible benefits include the ability to:

- Identify the full cost of activities including overhead.
- Allow activities to be better prioritized for budget analysis.
- Provide the ability to compare costs with other governments and outside service providers.

- Ensure that the public’s priorities are systematically considered in the budget process.
- Expand the public’s buy-in to the priorities and the supporting budget.
- Improve the ability to identify efficiencies.
- Improve service quality.
- Provide the ability to more precisely communicate the result of budget expenditures.

3. Improve Capital Planning and Monitoring Benefits

Increasing automation for the budget process will provide the following benefits:

a. Tangible

Improve Capital Planning and Monitoring Quantifiable Benefits Summary

Asset Preservation Savings	Not Estimated
CIP Project Savings	Not Estimated
Total Annual Savings	

We believe this opportunity can provide significant tangible benefits to the county, but these were not included as part of the Business Case. We recommend that the County establish a capability to measure any such savings if it moves forward with the recommendation referenced here.

Areas where there are potential tangible benefits are as follows:

- Asset Preservation processes will extend the useful life of an asset before replacement or major reconstruction is required. Studies indicate that 4 to 10 dollars can be saved for every dollar spent on preservation. The county reports \$603 million in infrastructure assets and \$1,198 million in buildings. We believe that the county can achieve significant savings by investing in preservation techniques and schedules that will extend the life of the asset.
- Common practices supported by project management tools, including current financial reporting on project expenditures, can be used in an effort to reduce project costs and improve project completion rates by providing better visibility to status and scope of the projects in the capital program.

b. Intangible

Implementation of a countywide project tracking process that includes both quantitative and qualitative information on project status, budget, schedule, scope, and quality would generate the following benefits:

- Eliminate inefficiencies and inconsistencies produced by dual ARMS/IBIS project accounting processes.
- Provide more information to the departments that lack adequate monitoring systems.
- Allow action to be taken earlier to avoid project schedule or budget overruns.
- Reduce the number of provisos by providing the Council with status reporting.
- Provide the ability to coordinate effort for projects in similar areas.
- Enhance the capital budget information (justification, total cost of ownership) and facilitation of better sharing of information between the OMB, Departments, and Council would generate the following benefits:
 - Provide more qualitative project information to the Council and the budget process. (Note: however it is important to develop reporting mechanisms that focus on the small number of at-risk projects rather than overloading OMB and Council with information on all CIP projects).
 - Provide efficiency and effectiveness in delivering on information.
 - Provide for a better use of resources.
 - Provide additional information for decision-making.
- Facilitate better program decisions across the county through better coordination of multi-department issues (where one project impacts another department).
- Provide visibility of new projects.
- Streamline CIP reconciliation and flexible budgeting efforts.
- Implementation of a countywide asset management approach would generate the following benefits:
 - Maintain value of the asset rather than replace it.
 - Achieve lowest life cycle costs for capital facilities.

- Provide a prioritization method for major maintenance and preservation projects.
- Provide a better return on investment for taxpayer resources (stewardship).
- Support GASB 34 compliance.

Providing the ability to better anticipate and prioritize capital improvement needs would generate the following benefits:

- Reduce effort through the use of common tools.
- Provide more flexibility in resource utilization. Staff trained in the capital planning process in one organization could be loaned to another organization to provide additional help.
- Increase employee mobility. Staff trained in the common capital planning process could more easily move from one organization to another.
- Provide coordinated policy for planning.

Appendix C: Assumptions Behind Business Development



The following assumptions were made in the development of this business case.

- PeopleSoft will be retained as the human resources/payroll solution.
- Oracle will be the financial solution.
- A system integrator will be selected to manage and staff the transition projects. Because the end result is best of breed, the selected vendor will demonstrate experience with both PeopleSoft and Oracle and take contractual responsibility for the conversion.
- The current PeopleSoft configuration will be reviewed and updated to implement best practices before additional agencies are converted.
- Straddle agencies will convert in the initial project. Since these agencies use IBIS already, these agencies present the least risk for conversion and provide a significant benefit for the agencies.

The county will update the ERP cost estimates to reflect the change in strategy to implement IBIS countywide. The ERP cost estimates were based upon previous Dye Management Group, Inc. and Moss Adams estimates with different assumptions. However, it was not within the scope of this project to re-estimate the ERP costs.

Appendix D: Constraints



This section presents some of the constraints that should be considered and addressed as new business processes and new technologies are implemented. The Business Operating Model Report contains a detailed listing of these constraints.

- There is a lack of available resources in terms of people, time, and money. Developing an atmosphere of evaluation and continuous improvement takes consistent and thoughtful attention toward short-term action at a higher price, with an understanding it will set the stage for long-term improvement.
- Changes in job functions may affect union contracts. Prior to implementation, the county must determine the affected contracts and begin working with union representatives to address any issues.
- The county does not currently have a culture that is conducive to self-evaluation, nor are they used to including customers and/or suppliers to the analysis of performance. This will require a significant culture change, one of openness to criticism. Initially, there may be significant resistance to the changing processes.
- The county has not usually completed performance appraisals for represented employees in the past because they receive step increases as negotiated in the contracts. Some departments such as the Superior Court and the Department of Judicial Administration conduct performance appraisals as a matter of policy. A program of performance measurement should be negotiated into the union contracts.
- There are specific laws governing how positions are filled, providing for equal opportunity and preventing discrimination. The mentoring and succession planning programs must operate within these laws.
- As personal information is going to be made available online, serious attention must be paid to issues of security and privacy. Firewalls, password protected gateways, and limited access to private information must be implemented.
- The county may not have the ability to undertake such a major technology project or be willing to impose the business change management necessary to do so successfully.
- The capital budgeting requirements in the King County codes are inconsistent with preservation of assets. The codes controlling the capital budget process are geared toward newly constructed assets.